

ABSTRACT OF THE DISCLOSURE

A high-gain preamplifier based on optical parametric amplification. A first nonlinear crystal is operatively connected to a second nonlinear crystal. A first beam relay telescope is operatively connected to a second beam relay telescope, to the first nonlinear crystal, and to the second nonlinear crystal. A first harmonic beamsplitter is operatively connected to a second harmonic beamsplitter, to the first nonlinear crystal, to the second nonlinear crystal, to the first beam relay telescope, and to the second beam relay telescope.